



Missouri Department of Transportation ~ District #5

**Bid Request No. D5-08-040B**  
**Bid Opening Date: May 15, 2008, 1:00 PM CDST**

## INVITATION TO BID FOR ASPHALT (PLANT PICKUP)

May 5, 2008

### TO ASPHALT SUPPLIERS:

The Missouri Department of Transportation (MoDOT) desires to establish pricing for **Plant Pickup of Asphalt for the District Five (5) Maintenance Sheds.**

All bidders must adhere to the specifications listed herein.

The bidder may withdraw, modify or correct their bid after it has been deposited with the department, provided such request is submitted in writing and received before the time specified for opening bids. Such a request received within the time specified will be accepted, attached to the bid, and to have been considered modified accordingly. No bid may be modified, corrected, or withdrawn after the time specified for the opening of bids.

Bids must be typed or written in ink, and must show the bidders complete company name and address, and signature of the authorized representative of the company in the spaces provided on the bid sheet.

The Missouri Highways and Transportation Commission reserves the right to waive technicalities and to reject any or all bids and from the best and most economical source. No bid is final until formally accepted by the Commission.

Award will be a 'Multiple Award' bid. MoDOT reserves the right to choose a supplier based upon availability and cost in respect to plant locations in any given area per project.

Please also note these requirements:

*The Vendor must be registered and maintain good standing with the Secretary of State of the State of Missouri and other regulatory agencies, as may be required by law or regulations. Prior to the issuance of a purchase order and/or notice to proceed, the Contractor will be required to submit to MoDOT a copy their current Authority Certificate from the Secretary of State of the State of Missouri. Please submit certificate at the time of bid.*

*All Vendors must also be in Compliance with House Bill 600, Section 34.060 RSMo, which states MoDOT is precluded from contracting with a vendor or its affiliate who makes sales at retail of tangible personal property or for the purpose of storage, use or consumption in this state but fails to collect and properly pay the tax as provided in RSMo 144.*

If you have any questions, please give me a call.

Sincerely yours,

Corey Duemmel  
General Services  
Missouri Department of Transportation, District 5  
(573) 526-6956



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## BID SHEETS

### SCOPE OF WORK

The intent of this bid is designed to establish price agreements with multiple suppliers where product will be chosen based upon availability and cost in respect to plant locations in any given area in relation to a project.

### BID OPENING DATE

MoDOT will host a bid opening on May 15, 2008, at the District Office General Services Division, CITY, Missouri. All sealed bid submittals must be received and in hand no later than 1:00 P.M., Central Daylight Standard Time where they will be publicly opened and read. The time will be determined using a MoDOT predetermined clock. Bids will be accepted on time if time stamped using one of the following methods: 1) electronically time stamped, 2) handwritten initials and timestamp of a MoDOT representative, and 3) verification that any Fed-X, UPS or USPS certified mail, time stamped mail that clearly indicates that the sealed bid was received at the listed address prior to the closing bid time. No award will be made at this time until final review of all documents is complete.

Return sealed bids to: **MoDOT D5, C/O G.S. Bid D5-08-040B 1511 Mo. Blvd (P.O. Box 718), Jefferson City, MO 65102.**

### BID PERIOD AND CONDITIONS

Bid prices will be established for two time periods. The first (1<sup>st</sup>) period is from **May 2008 through July 31, 2008**. The second (2<sup>nd</sup>) period is from **August 1, 2008 through October 15, 2008**. At the time for renewal for the 2<sup>nd</sup> period, bid price forms will be mailed to all bidders who returned a price for the first bid period. A vendor will only be allowed to submit a price on items for the 2<sup>nd</sup> period if a price was previously submitted for the 1<sup>st</sup> time period. All price changes must be mutually agreed upon by both parties.

### ORDERING PROCEDURE

MoDOT facilities should give all suppliers 48 hours notice prior to pickup.

### SPECIFICATIONS

See attached 'Specifications Page'.

### PRICING

See attached 'Pricing Page'

### METHOD OF AWARD

Award will be a 'Multiple Award' bid. MoDOT reserves the right to choose a supplier based upon availability and cost in respect to plant locations in any given area per project.



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## SPECIFICATIONS

**Item 1: Base Hot Mix** Meeting Specifications Section 401 Missouri Standard Specifications for Highway Construction, 2004 and any General Provisions and Supplemental Specifications.

**Item 2: BP-1 Hot Mix** Meeting Specifications Section 401 Missouri Standard Specifications for Highway Construction, 2004 and any General Provisions and Supplemental Specifications.

**Item 3: BP-2 Hot Mix** Meeting Specifications Section 401 Missouri Standard Specifications for Highway Construction, 2004 and any General Provisions and Supplemental Specifications.

**Item 4: Plant Mix Bituminous Surface Leveling** Meeting Specifications Section 402 Missouri Standard Specifications for Highway Construction, 2004 and any General Provisions and Supplemental Specifications.

**Item 5: Bituminous Stockpile Patching Material – Cold Mix** Meeting Specifications MGS-93-07A with Specification Section 1004, Grade 1 Modification of ½" passing 100% gradation from Missouri Standard Specifications for Highway Construction, 2004 and any General Provisions and Supplemental Specifications.

**\*\*NOTE\*\***

Any General Provisions and Supplemental Specifications can be found on The Missouri Department of Transportation's website at [www.modot.org](http://www.modot.org).

All awarded vendors and materials must be QC/QA Certified as outlined in the Missouri Standard Specifications for Highway Construction – 2004, Section 1001.14. If you have any questions about the QC/QA, please contact Operations Engineer, Patti Lemongelli (573) 751-6851.



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## PRICING PAGES

	ITEM 1	ITEM 2	ITEM 3	ITEM 4	ITEM 5
	Base Hot Mix following Spec 401 as per bid sheet	BP-1 Hot Mix following Spec 401 as per bid sheet	BP-2 Hot Mix following Spec 401 as per bid sheet	Plant Mix Bituminous Surface Leveling following Spec 402	Cold Mix following Spec MGS-93-07A, Section 1004 Grade A Modification of 1/2" Passing 100% Gradation
	Unit Price Per Ton	Unit Price Per Ton	Unit Price Per Ton	Unit Price Per Ton	Unit Price Per Ton
BENTON					
BOONE					
CAMDEN					
CALLAWAY					
COLE					
COOPER					
CRAWFORD					
FRANKLIN					
GASCONADE					
LACLEDE					
MARIES					
MILLER					
MONITEAU					
MONTGOMERY					
MORGAN					
OSAGE					
PETTIS					
PHELPS					
PULASKI					
SALINE					



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- NOTE:** For bids to be considered, the attachment entitled "PREFERENCE IN PURCHASING PRODUCTS" must be either attached to the bid or on file in this office and must be dated in the current model year.
- NOTE:** The attachment entitled "MISSOURI DOMESTIC PRODUCT PROCUREMENT ACT" certificates of compliance must be completed and submitted with your bid for it to be considered responsive.
- NOTE:** All suppliers must be in good standing with the Secretary of State's office prior to issuance of 'Notice to Proceed.'
- NOTE:** All suppliers must also be in compliance with House Bill 600, Section 34.040.6 RSMo, which states MoDOT is precluded from contracting with a supplier or its affiliate who makes sales at retail of tangible personal property or for the purpose of storage, use or consumption in this state but fails to collect and properly pay the tax as provided in RSMo 144.

The undersigned, as bidder, understands that this project involves state funds and the bidder awarded the contract will be required to comply with Executive Order 94-03 of the Governor of the State of Missouri dated January 14, 1994. This order stipulates that there shall be no discriminatory employment practices by the Supplier or his subcontractors, if any, based on race, color, religion, creed, national origin, sex, or age. The undersigned Supplier or his subcontractors, if any, shall give written notice of their commitments under this clause to any labor union which they have bargaining or other agreements.

**SEALED BIDS TO BE MAILED TO:**  
Missouri Department of Transportation  
1511 Missouri Blvd.  
Jefferson City, Missouri 65102

**Bid Clearly marked**  
**Request No. D5-08-040B**  
**Bid opening 1:00 PM CDST**  
**May 15, 2007**

FIRM \_\_\_\_\_  
STREET \_\_\_\_\_  
STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
TELEPHONE \_\_\_\_\_  
PRINT NAME \_\_\_\_\_  
SIGNATURE \_\_\_\_\_  
EMAIL \_\_\_\_\_



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### SIGNATURE AND IDENTITY OF BIDDER

The undersigned states that the correct LEGAL NAME and ADDRESS of (1) the individual Bidder, (2) each partner or joint ventures (whether individuals or corporations, and whether doing business under a fictitious name), or (3) the corporation (with the state in which it is incorporated) are shown below; that (if not signing with the intention of binding himself to become the responsible and sole contractor) he is the agent of, and duly authorized in writing to sign for the Bidder or Bidders; and that he is signing and executing this (as indicated in the proper spaces below) as the proposal of a

☐ sole individual

☐ partnership

☐ joint venture

☐ corporation, incorporated under laws of state of \_\_\_\_\_

Dated \_\_\_\_\_, \_\_\_\_\_.

Name of individual, all partners,  
or joint ventures:

Address of each:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

doing business under the name of: .

Address of principal place of business in Missouri

\_\_\_\_\_  
(If using a fictitious name, show  
this name above in addition  
to legal names)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
(If a corporation, show its name above)

\_\_\_\_\_

ATTEST: (SEAL)

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
Title

(NOTE: If the Bidder is doing business under a FICTITIOUS NAME, the Proposal shall be executed in the legal name of the individual, partners, joint venturers, or corporation, with the legal address shown, and REGISTRATION OF FICTITIOUS NAME filed with the Secretary of State, as required by Sections 417.200 to 417.230, RS Mo. If the Bidder is a CORPORATION NOT ORGANIZED UNDER THE LAWS OF MISSOURI, it shall procure a CERTIFICATE OF AUTHORITY TO DO BUSINESS IN MISSOURI, as required by Section 351.570 and following, RS Mo. A CERTIFIED COPY of such Registration of Fictitious Name or Certificate of Authority to do Business in Missouri shall be filed with the Missouri Highway and Transportation Commission, as required by the Standard specifications, Sec 102.6.6 and 102.6.7.



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### ANTI-COLLUSION STATEMENT

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ ) SS.

\_\_\_\_\_ being first duly

sworn, deposes and says that he is \_\_\_\_\_  
Title of Person Signing

Of \_\_\_\_\_  
\_\_\_\_\_  
Name of Bidder

that all statements made and facts set out in the proposal for the above project are true and correct; and that the bidder (The person, firm, association, or corporation making said bid) has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with such bid or any contract which may result from its acceptance.

Affiant further certifies that bidder is not financially interested in, or financially affiliated with, any other bidder for the above project.

By \_\_\_\_\_

By \_\_\_\_\_

By \_\_\_\_\_

Sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_



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## ATTACHMENTS

- Specifications, MGS-93-07A
- Missouri Standard Specifications for Highway Construction, 401, 402 and 1004
- General Provisions and Supplemental Specifications to 401, 402 and 1004
- Terms and Conditions
- Preference in Purchasing Products
- Map of District Boundaries





BITUMINOUS STOCKPILE PATCHING MATERIAL MGS-93-07A

**1.0 DESCRIPTION.** This specification covers furnishing a plant Mixed bituminous mixture for patching asphalt or concrete pavement, suitable for stockpiling and cold-applied use during inclement weather conditions.

**1.1** For purposes of this specification, the manufacturer is considered to be the entity overseeing combination of the raw materials and responsible for the quality of the final product. All pre-approvals will be handled through the manufacturer.

**1.2** The attention of the bidder is specifically directed to the mixture performance characteristics of this provision. Material not meeting these characteristics and any other material not meeting the specifications and deemed unusable by the engineer shall be removed and disposed of by the bidder immediately upon notification, at no cost to the purchaser. This requirement is to be expressly understood as a part of the bid.

**2.0 MATERIALS.** All mixtures furnished under this specification shall be pre-approved and shall meet the manufacturer's specifications, as well as any additional requirements listed herein.

**2.1 AGGREGATE.** The aggregate shall be from sources recommended by the asphalt supplier and shall meet the manufacturer's recommended tolerances for quality and gradation when tested on extracted material prior to use. One hundred percent of the material shall pass a 1/2" sieve.

**2.2 ASPHALT.** The asphalt portion is considered to include the bituminous material and any additives used in the formation of the mixture, other than aggregates. The percent asphalt shall not vary by more than 0.5% from the manufacturer's recommended asphalt content. Other asphalt properties shall meet the manufacturer's tolerances when tested.

**2.3 MIXTURE.** Aggregates shall be artificially heated and at least surface dried prior to uniformly mixing with the asphalt.

**3.0 MIXTURE PERFORMANCE CHARACTERISTICS.**

**3.1** The mixture shall remain pliable and workable in the field at a mixture temperature of 20 F or less. It shall pass the workability test in the laboratory.

**3.2** No stripping of the asphalt from the aggregate shall occur in the field. It shall pass the water resistance test in the laboratory.

**3.3** The material shall be suitable for "pothole" or other small repair type application, however is not required to be suitable for mechanical spreading operations.

**3.4** The only requirement for application shall be removal of loose and non-bonded material from the repair area and compaction by truck or other wheel-applied loads.

**3.5** The mixture shall maintain adhesive qualities in areas which are wet at the time of application and shall not bleed or flush when overlaid with hot mix. No tack or prime material shall be required to hold the material in any application for repair to asphalt or concrete pavement.

**3.6** After delivery, the mixture shall be capable of maintaining all performance characteristics after remaining in a stockpile of 25 tons or more, for a minimum of 6 months. Except for the workability characteristic, the in-place mixtures shall be capable of maintaining all performance characteristics for a period of 3 months under all forms of traffic and weather.

#### **4.0 TEST PROCEDURES.**

**4.1 WATER RESISTANCE TEST.** Fifty grams of the mixture, whether freshly prepared or taken from the stockpile, shall be heated at 250 F in a laboratory oven for one hour, cooled to 200 F at ambient temperature, and then placed in 400 ml of boiling distilled water in a 600 ml glass beaker and stirred with a glass rod at the rate of one revolution per second for 3 minutes. The water shall be decanted and the mix spread on an absorbent paper for visual observation of the coating. The aggregate shall be at least 90 percent coated with a bituminous film.

**4.2 WORKABILITY TEST.** Approximately five pounds of the mixture shall be cooled to 20 F in the laboratory. After cooling, the mixture shall be capable of being broken up readily with a spatula having a blade length of approximately eight inches.

**5.0 APPROVAL AND PREQUALIFICATION.** The following information shall be furnished for each aggregate, asphalt, and mixture combination. At the engineer's discretion, part or all of the combinations may be laboratory and/or field evaluated.

**5.1** Prior to use or acceptance of any material, the manufacturer shall submit samples for laboratory evaluation to the State Materials Engineer, Jefferson City, MO, along with specific test results for any specified laboratory test and a manufacturer's certification. Following satisfactory evaluation of the submittal and the material, a minimum of one ton of material shall be furnished free of charge to a local maintenance building designated by the State Maintenance Engineer for field evaluation. The field evaluation period will not be less than one winter period. Material submitted for evaluation after October 1 will not be considered for field evaluation for that winter. Mixtures containing the same asphalt and similar aggregates may be considered for approval without field testing, at the engineer's discretion.

**5.2 MANUFACTURER'S CERTIFICATION.** The manufacturer shall certify to the following information: 1) The brand name or other identification of the material being submitted for approval, 2) The formation and source of the aggregates, 3) The source and supplier of the asphalt, 4) The gradation and asphalt content of the mixture, 5) Allowable ranges for the asphalt content and each designated sieve size, specifically including the # 200 sieve, and 6) A list of any specific limitations as to the use of the material, specifically including maximum/minimum roadway temperatures and maximum storage time, outside in an uncovered condition. Furthermore, the manufacturer shall certify that the material is intended for use as described in this provision and that no changes in composition, materials, or properties will be made without proper notification. In the event that the manufacturer is

not the asphalt supplier, the certification shall include a letter from the asphalt supplier stating that they concur with use of their material for these purposes.

**5.3 MIXTURE CHANGES.** The manufacturer shall notify the State Materials Engineer of any changes to the mixture. Typically changes in materials (other than some aggregate sources) will require field evaluation. Small changes in additives or the composition for improvements may not, however the engineer will make the final judgement as to whether a new field evaluation is required.

**6.0 BASIS OF ACCEPTANCE.** Each lot or shipment furnished shall be accompanied by a manufacturer's certification that the material furnished is of the same ingredients and composition as that submitted for evaluation on (date submitted) and that no changes have been made. All material will be accepted on the basis of brand name, required certification, and other such tests as might be performed by the engineer.

**7.0 INSPECTION.** Inspection will be made at the point of delivery.

# MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION 2004

Sections 401, 402 and 1004



## SECTION 401

### PLANT MIX BITUMINOUS BASE AND PAVEMENT

**401.1 Description.** This work shall consist of a bituminous mixture placed, spread and compacted as shown on the plans or as directed by the engineer.

#### 401.2 Material.

**401.2.1** The grade of asphalt binder will be specified in the contract. When the plasticity index on individual aggregate fractions with 10 percent or more passing the No. 30 (600  $\mu$ m) sieve exceeds 3, a moisture susceptibility test shall be required in accordance with Sec 401.4.5 during the mix design process. If the plasticity index exceeds that of the material approved for the mix design, additional testing may be required. All material shall be in accordance with Division 1000, Material Details, and specifically as follows:

Item	Section
Coarse Aggregate	1004.2
Fine Aggregate	1002.3
Mineral Filler	1002.4
Hydrated Lime	1002.5
Asphalt Binder, Performance Graded (PG)	1015

**401.2.2 Recycled Asphalt Pavement.** Recycled Asphalt Pavement (RAP) may be used in any mixture. A maximum of 20 percent RAP may be substituted in lieu of mineral aggregate. All RAP material, except as noted below, shall be tested in accordance with AASHTO TP 58, *Method for Resistance of Coarse Aggregate Degradation by Abrasion in the Micro-Deval Apparatus*. Aggregate shall have the asphalt coating removed by either extraction or binder ignition. The material shall be tested in the Micro-Deval apparatus at a frequency of once per 1500 tons (Mg). The percent loss shall not exceed the Micro-Deval loss of the combined virgin material by more than five percent. Micro-Deval testing will be waived for RAP material obtained from MoDOT roadways. All RAP material shall be in accordance with Sec 1004 for deleterious and other foreign material.

**401.3 Composition of Mixtures.** Aggregate sources shall be from the specific ledge or combination of ledges within a quarry, or processed aggregate from a particular product, as submitted in the mix design. The total aggregate prior to mixing with asphalt binder shall be in accordance with the following gradation requirements:

Sieve Size	Percent Passing by Weight (Mass)		
	Base	BP-1	BP-2
1 inch (25.0 mm)	100	100	100
3/4 inch (19.0 mm)	85-100	100	100
1/2 inch (12.5 mm)	60-90	85-100	95-100
No. 4 (4.75 mm)	35-65	50-70	60-90
No. 8 (2.36 mm)	25-50	30-55	40-70
No. 30 (600 $\mu$ m)	10-35	10-30	15-35
No. 200 (75 $\mu$ m)	5-12	4-12	4-12

**401.4 Job Mix Formula.** At least 30 days prior to placing any mixture on the project, the contractor shall submit a mix design for verification and approval by Construction and Materials. The mixture shall be designed in accordance with Asphalt Institute Publication MS-2, *Mix Design Methods for Asphalt Concrete and Other Hot-Mix Types*. The mixture shall be compacted and tested at a minimum of three asphalt contents separated by a maximum of 0.5 percent in accordance with AASHTO T 245, except as herein noted. The test method shall be modified by short-term aging the specimens in accordance with AASHTO R 30. A detailed description of the mix design process shall be included with the job mix formula. Representative samples of each ingredient for the mixture shall be submitted with the mix design. Aggregate fractions shall be in accordance with the same proportions as the proposed job mix formula. A minimum of 150 pounds (68 kg) will be required for any individual fraction. The amount of each ingredient submitted shall be as follows for each mix design to be verified:

Ingredient	Minimum Amount
Aggregate	300 lbs (136 kg)
Hydrated Lime, Mineral Filler and/or Baghouse Fines	20 lbs (9 kg)
Asphalt Binder	10 gal. (38 L)

**401.4.1 Mixture Design.** Laboratories that participate and achieve a score of 3 or greater in the AASHTO proficiency sample program for T 11, T 27, T 84, T 85, T 166, T 209, T 308 and T 245 will have the mixture verification process waived. The mix design shall be submitted to Construction and Materials for approval at least seven days prior to mixture production.

**401.4.2 Required Information.** The mix design shall include raw data from the design process and shall contain the following information:

- (a) Source, grade and specific gravity of asphalt binder.
- (b) Source, type (formation, etc.), ledge number(s) if applicable, gradation, and deleterious content of the aggregate.
- (c) Plasticity index of each aggregate fraction.
- (d) Bulk and apparent specific gravities and absorption of each aggregate fraction in accordance with AASHTO T 85 for coarse aggregate and AASHTO T 84 for fine aggregate, including all raw data.
- (e) Specific gravity of hydrated lime, mineral filler or baghouse fines, if used, in accordance with AASHTO T 100.
- (f) Percentage of each aggregate component.
- (g) Combined gradation of the job-mix.
- (h) Percent of asphalt binder, by weight (mass), based on the total mixture.
- (i) Bulk specific gravity ( $G_{mb}$ ) by AASHTO T 166, Method A of a laboratory compacted mixture.
- (j) Percent air voids ( $V_a$ ) of the laboratory compacted specimen.

(k) Voids in the mineral aggregate (VMA) and voids in the mineral aggregate filled with asphalt binder (VFA).

(l) Theoretical maximum specific gravity ( $G_{mm}$ ) as determined by AASHTO T 209 in accordance with Sec 403.19.3 after the sample has been short-term aged in accordance with AASHTO R 30.

(m) Mixing temperature and molding temperature.

(n) Bulk specific gravity ( $G_{mb}$ ) of the combined aggregate.

(o) Percent chert contained in each aggregate fraction.

(p) Baghouse fines added for design.

(i) Batch and continuous mix plants – Indicate which aggregate fraction to add baghouse percentage during production.

(ii) Drum mix plants – Provide cold feed settings with and without baghouse percentage.

**401.4.3 Mixture Approval.** No mixture will be accepted for use until the job mix formula for the project is approved by Construction and Materials. The job mix formula approved for each mixture shall be in effect until modified in writing by the engineer. When unsatisfactory results or other conditions occur, or should a source of material be changed, a new job mix formula may be required. In lieu of a new laboratory design, mixtures requiring adjustment beyond the limits allowed in Sec 401.8.2 may be designed in the field based on characteristics of plant-produced mixture in accordance with Sec 401 and verified by Construction and Materials, which may require new aggregate characteristics.

**401.4.4 Mixture Characteristics.** Mixtures shall have the following properties, when tested in accordance with AASHTO T 245. The number of blows with the compaction hammer shall be 35. BP-1 and BP-2 mixtures shall have between 60 and 80 percent of the VMA filled with asphalt binder.

Percent Air Voids	AASHTO T 245 Stability lb (N)	Voids in Mineral Aggregate <sup>a</sup> (VMA)
3.5-4.5	750 (3350)	13.0

<sup>a</sup>Bituminous base mixtures that would require 12.0 percent VMA following Asphalt Institute MS-2 will have a minimum 12.0 percent requirement.

**401.4.5 Moisture Susceptibility.** Moisture susceptibility may be tested in accordance with AASHTO T 283. A minimum retained strength of 70 percent shall be obtained when tested for moisture susceptibility. An approved anti-strip additive may be added to increase retained strength to a passing level.

**401.4.6 Time Limit.** A mix design may be transferred to other projects for a period of three years from the original approval date provided satisfactory results are obtained during production and placement.

**401.5 Gradation and Deleterious Content Control.** In producing mixtures for the project, the plant shall be operated such that no intentional deviations from the job-mix formula are made. The contractor shall determine on a daily basis at minimum, the gradation on the

aggregate reclaimed from the RAP by either extraction or binder ignition. The gradation results shall be used to determine the daily specification compliance for the combined gradation. Mixtures as produced shall be subject to the following tolerances and controls:

(a) The total aggregate gradation shall be within the master range specified in Sec 401.3.

(b) The maximum variations from the approved job-mix formula shall be within the following tolerances:

Passing No. 8 (2.36 mm) sieve	± 5.0 percentage points
Passing No. 200 (75 µm) sieve	± 2.0 percentage points

(c) The deleterious content of the material retained on the No. 4 (4.75 mm) sieve shall not exceed the limits specified in Sec 1004.2.

(d) If the plasticity index of any fraction exceeds that of the material approved for the mix design, additional testing may be required.

(e) The quantity of asphalt binder introduced into the mixer shall be the quantity specified in the job-mix formula. No changes shall be made to the quantity of asphalt binder without written approval from the engineer. The quantity of asphalt binder determined by tests on the final mixture shall not vary by more than ± 0.5 percent from the job-mix formula.

**401.5.1 Sample Location.** The gradations of the total aggregate will be determined from samples taken from the hot bins on batch-type plants or continuous mixing plants or from the composite cold feed belt on drum mix plants. The deleterious content of the total aggregate shall be determined from samples taken from the composite cold feed belt. When required, samples for plasticity index shall be taken from the stock pile. The RAP shall be sampled from the RAP feeding system on the asphalt plant. Samples for asphalt content determination may be taken at the plant.

**401.5.2 Substitutions.** At the option of the contractor and at no cost to the Commission, the contractor may use a mixture with smaller size aggregate or an approved Sec 403 mixture, design level C, E or F, with the same or smaller size aggregate in lieu of any Sec 401 mixture. When this substitution is made, the layer thickness and density requirements in Sec 401 will apply.

**401.5.3 Commercial Mixture.** If specified in the contract that an approved commercial mixture may be used, the contractor shall, at least seven days prior to the desired time of use, furnish a statement setting out the source and characteristics of the mixture proposed to be furnished. The statement shall include:

(a) The types and sources of aggregate, percentage range of each, and range of combined gradation.

(b) The percent and grade of asphalt binder.

(c) The mixing time and range of mixture temperature.

The plant shall be designed and operated to produce a uniform, thoroughly mixed material free from segregation. It will not be necessary for the plant to meet the requirements of Sec 404. A field laboratory will not be required. If the proposed mixture and plant are approved by the engineer, the component material and the mixture delivered will be accepted or rejected by



visual inspection. The supplier shall furnish with the first truckload of each day's production, a certification that the material and mixture delivered are in conformance with the approved mixture. Upon completion of the work, a plant certification shall be furnished by the supplier for the total quantity delivered. The mixture shall be transported, placed and compacted in accordance with Sec 401.7. Without specific contract designation, an approved commercial mixture may be used in lieu of plant mix bituminous pavement or base course mixtures for work that is considered temporary construction and is to be maintained at the contractor's expense. Temporary construction will be defined as work that is to be removed prior to completion of the contract.

**401.5.4 Moisture Content.** The bituminous mixture, when sampled and tested in accordance with MoDOT Test Method TM-53, shall contain no more than 0.5 percent moisture by weight (mass) of the mixture.

**401.5.5 Contamination.** The bituminous mixture shall not be contaminated with deleterious agents such as unburned fuel, objectionable fuel residue or any other material not inherent in the job mix formula.

**401.6 Field Laboratory.** The contractor shall provide a Type 3 field laboratory in accordance with Sec 601. The contractor may use the equipment provided in the Type 3 laboratory as long as adequate space is provided for the engineer's work.

#### **401.7 Construction Requirements.**

**401.7.1 Weather Limitations.** Bituminous mixtures shall not be placed on any wet surface or frozen pavement. Temperatures shall be obtained in accordance with MoDOT Test Method TM 20.

**401.7.2 Bituminous Mixing Plants.** Bituminous mixing plants and preparation of material and mixtures shall be in accordance with Sec 404.

**401.7.3 Subgrade Preparation.** The subgrade upon which the bituminous mixture is to be placed shall be prepared in accordance with Sec 209 and tacked or primed, as specified in the contract, in accordance with Secs 407 and 408, as applicable. For base widening work, the bottom of the trench shall be compacted until further consolidation is not visually evident, by use of a trench roller having a weight (mass) of no less than 300 psi (5.5 kg/mm) of width of rear roller, or by mechanical tampers or other methods approved by the engineer. Suitable excavated material may be used in shouldering operations. On the outside of curves, the design depth of trench at the beginning of the superelevation transition shall be varied gradually to the minimum depth at the end of the superelevation transition. Slight transitioning of the width of the base widening will be necessary to permit the indicated angle of repose or shear angle outside of the ultimate edge of surface. The bottom of the trench shall in no case be less than 3 inches (75 mm) below the surface of the existing pavement. All surplus excavated material shall be disposed of by the contractor in areas to be secured by the contractor beyond the right of way limits. An acceptable written agreement with the property owner on whose property the material is placed shall be submitted to the engineer.

**401.7.4 Hauling Equipment.** Trucks used for hauling bituminous mixtures shall be in accordance with Sec 404.

**401.7.5 Spreading.** The base course, primed surface, or preceding course or layer shall be cleaned of all dirt, packed soil or any other foreign matter prior to spreading the bituminous mixture. The mixture shall be spread in the number of layers and in the quantity required to obtain the compacted thickness and cross section shown on the plans. When placing multiple layers with varying thicknesses, the thicker layer shall be placed first. The compacted

thickness of a single layer of bituminous pavement mixture shall be no more than 2 inches (50 mm) for the surface course and 4 inches (100 mm) for the leveling course.

**401.7.5.1 Irregularities.** The mixture shall be spread without tearing the surface and struck off such that the surface is smooth and true to cross section, free from all irregularities, and of uniform density throughout. Care shall be used in handling the mixture to avoid segregation. Areas of segregated mixture shall be removed and replaced with a suitable mixture at the contractor's expense. The outside edge alignment shall be uniform. Irregularities shall be corrected by adding or removing mixture before compacting. In situations where there is a dispute in the existence of segregation, the area in question will be tested in accordance with MoDOT Test Method TM 75. Mixture production shall immediately cease if either criteria of MoDOT Test Method TM 75 fail. Segregated mixtures shall be removed and replaced to the limits determined by the engineer.

**401.7.5.2 Leveling Course.** If required by the contract, a leveling course consisting of a layer of variable thickness shall be spread to the desired grade and cross section to eliminate irregularities in the existing surface. Spot-leveling operations over small areas, with feather-edging at high points and ends of spot areas, may be required prior to placing the leveling course. Rigid control of the placement thickness of the leveling course will be required. The mixture shall be practically free from segregation.

**401.7.5.3 Base Widening.** The specified total thickness of base widening shall be completed to the adjacent traveled way elevation as shown on the plans. Additional thickness of base widening may be placed as required prior to coldmilling, at the contractor's expense, and shall subsequently be coldmilled to the same elevation as the traveled way, if conducive to expedite operations. On base-widening work, a succeeding layer of bituminous mixture may be placed the same day as the previous layer, if it can be shown that the desired results are being obtained. On small areas, and on areas that are inaccessible to mechanical spreading and finishing equipment, the mixture may be spread and finished by hand methods if permitted by the engineer. At least one lane of the existing pavement and the adjacent shoulder shall be kept open to traffic at all times during construction, except for short intervals when the movement of the contractor's equipment will seriously hinder the flow of traffic. Intervals during which the contractor will be allowed to halt traffic shall be as designated by the engineer. The contractor shall not open more trench ahead of the first layer of the base widening than is necessary for placing that layer in one half a day's operations. The first layer of the base widening shall not be placed for a greater distance ahead of the second layer than is necessary for placing the second layer in one half a day's operations. The second layer shall not be placed for a greater distance ahead of the final layer than is necessary for placing the final layer in one day's operation. Any changes in these lengths shall be made only with written permission from the engineer.

**401.7.5.4 Edge Differential.** For roadways constructed under traffic, no pavement edge differential shall be left in place for more than seven days, unless approved by the engineer.

**401.7.6 Joints.** The minimum density of all traveled way pavement within 6 inches (150 mm) of a longitudinal joint, including the pavement on the traveled way side of the shoulder joint, shall be no less than 2.0 percent below the specified density. Once an established procedure has been demonstrated to provide the required density for longitudinal joints, at the engineer's discretion, the procedure may be used in lieu of density tests provided no changes in the material, typical location or temperatures are made. Pay adjustments due to longitudinal joint density shall apply to the full width of the lane paved. Adjustments due to joint density shall apply to the day's production from which the cores are obtained. Transverse joints shall be formed by cutting back on the previous run to expose the full depth of the layer. When a transverse vertical edge is to be left in place and opened to traffic, a temporary depth transition shall be constructed as approved by the engineer. The longitudinal

joints in one layer shall offset those in the layer immediately below by approximately 6 inches (150 mm). The joints in the final surface layer shall be at the lane lines of the traveled way, except that the placement width shall be adjusted such that pavement marking shall not fall on a longitudinal joint. Each side of the joint shall be flush and along true lines.

**401.7.7 Surfaced Approaches.** At locations designated in the contract or as specified by the engineer, approaches shall be primed in accordance with Sec 408 and surfaced with a plant mix bituminous mixture. The bituminous surface shall be placed as shown on the plans or as directed by the engineer. Approaches shall not be surfaced before the surface course adjacent to the entrance is completed. No direct payment will be made for any work required to condition and prepare the subgrade on the approaches.

**401.7.8 Compaction.** The compacted mixture shall have a minimum density of 92 percent of the theoretical maximum specific gravity. Density will be determined by the direct transmission nuclear method in accordance with MoDOT Test Method TM 41 or by a specific gravity method. When the contractor elects to place a lift of mixture greater than six times the nominal maximum aggregate size, cores shall be cut in half and the density of each half determined separately. In lieu of density requirements, mixtures used for wedging, transitions, shoulders, temporary bypasses to be maintained at the expense of the contractor, and areas where a commercial mixture is used shall be thoroughly compacted by at least three complete coverages over the entire area with either a pneumatic tire roller weighing (having a mass of) no less than 10 tons (9 Mg), a tandem-type steel wheel roller weighing (having a mass of) no less than 10 tons (9 Mg) or an approved vibratory roller. Rolling shall be performed at proper time intervals on each layer and shall be continued until there is no visible evidence of further consolidation.

**401.8 Quality Control.** The contractor shall maintain equipment and qualified personnel to perform QC field inspection, sampling and testing in accordance with applicable portions of Sec 403. A QC Plan will not be required. A proposed third party for dispute resolution shall be included with the mix design submittal.

**401.8.1 Mixture Testing.** The contractor shall test the mixture at least once every 1000 tons (1000 Mg) of production or a minimum of once per day for the gradation, deleterious content, and the asphalt content. If RAP is used and AASHTO T 308 is used to determine the asphalt content, the binder ignition oven shall be calibrated in accordance with MoDOT Test Method TM 77. At the engineer's discretion, testing may be waived when production does not exceed 200 tons (200 Mg) per day. The contractor shall certify the proper proportions of a previously proven mixture were used.

**401.8.2 Failing Test.** If a gradation, deleterious content, or asphalt content test result falls outside of the specification tolerances, a review or adjustment of the plant settings and production shall be made and another sample shall be immediately taken. If the second test falls outside of the specification tolerances, production shall be immediately ceased until the mixture can be brought back into specification. Cold feed bins may be adjusted 5.0 percent. Material from different formations or ledges within the formation may be adjusted no more than 2.0 percent from the approved job mix formula. Mixtures requiring more than 5.0 percent adjustment will require a new mix design.

**401.8.3 Retained Samples.** One half of the contractor's sample for gradation, deleterious content, plasticity index, and asphalt content and all cores shall be retained for the engineer. The contractor shall retain the samples for 7 days.

**401.8.4 Pavement Testing.** During construction, the engineer will designate as many tests as necessary to ensure that the course is being constructed of proper thickness, composition and density. Density of the roadway shall be determined by a daily sample consisting of four

cores obtained by the contractor at stratified random locations selected by the engineer. A joint density sample shall consist of four cores taken from alternating sides of the lane placed at random locations selected by the engineer. The maximum theoretical density shown on the job mix formula shall be used for this determination. Samples, minimum 4-inch (100 mm) diameter cores, shall be taken the full depth of the layer to be tested. The contractor shall restore the surface from which samples have been taken immediately with the mixture under production or with a cold patch mixture acceptable to the engineer.

**401.8.5 Density Adjustment.** Payment for mixture placed at or below the required minimum density will be adjusted as follows:

Field Density Percent of Maximum Theoretical Density	Percent of Contract Unit Price <sup>a</sup>
91.5 or above	100%
91.0 to 91.4, inclusive	97%
90.5 to 90.9, inclusive	94%
90.0 to 90.4, inclusive	90%
89.5 to 89.9, inclusive	80%
Below 89.5	Remove and Replace

<sup>a</sup>When adjustments are necessary, the lower percent of the contract unit price of either the pavement or joint density adjustment will apply.

**401.9 Quality Assurance.** Acceptance tests will be performed by the engineer at a rate of one independent sample per day when production exceeds 500 tons (500 Mg) per day. A favorable comparison will be considered when a QA test is within the specification tolerances. At least once for every five days of production, a split of the contractor's sample will be tested. If the results of the split sample are not within five percent on all sieves above the No. 200 (75µm), two percent on the No. 200 (75µm), within the specification ranges on the deleterious content, within two percentage points on the plasticity index, and within 0.5 percent on the asphalt content from the contractor's results, another split sample will be taken jointly with the contractor and tested. If the second test results do not compare within the specification tolerances, production shall cease until the discrepancy is resolved. If the second test results compare within the above tolerances, production may continue. Results of QA testing will be furnished to the contractor within 24 hours of obtaining the sample.

**401.10 Surface Tolerance.** The finished layers shall be substantially free from waves or irregularities and shall be true to the established crown and grade. At transverse construction joints, the surface of all layers shall not vary from a 10-foot (3 m) straightedge applied parallel to the center line, by more than 1/4 inch (6 mm), except that the entire surface of the final layer of plant mix bituminous base, when this layer is used as the final riding surface course, or bituminous pavement mixture, shall not vary from the 10-foot (3 m) straightedge by more than 1/8 inch (3 mm). Areas exceeding this tolerance shall be re-rolled, replaced or otherwise corrected in a manner satisfactory to the engineer.

**401.11 Defective Mixture.** Any mixture showing an excess of bituminous material or that becomes loose and broken, mixed with dirt, or is in any way defective, shall be removed and replaced with a satisfactory mixture, which shall be immediately compacted to conform with the surrounding area.

**401.12 Pavement Marking.** If the contractor's work has obliterated existing pavement marking on resurfacing projects open to through traffic, the pavement marking shall be replaced at the contractor's expense in accordance with Sec 620.

**401.13 Method of Measurement.** Measurement will be in accordance with Sec 403.

**401.14 Basis of Payment.** The accepted quantities of plant mix bituminous pavement and base course will be paid for at the contract unit price for each of the pay items included in the contract. Payment for obtaining and delivering samples of compacted mixture from the base and replacement of the surface will be made per sample at the fixed contract unit price specified in Sec 109. No direct payment will be made for excavating the trench for base widening, or for hauling and disposing of excess excavation material.



## SECTION 402

### PLANT MIX BITUMINOUS SURFACE LEVELING

**402.1 Description.** This work shall consist of placing, spreading and compacting a bituminous mixture as shown on the plans or as directed by the engineer. Spot wedging will not be required.

**402.2 Material.** All material shall be in accordance with Division 1000, Material Details, and specifically as follows:

Item	Section
Coarse Aggregate	1004.2
Fine Aggregate	1002.3
Mineral Filler	1002.4
Asphalt Binder, Performance Graded (PG)	1015.3

**402.2.1 Asphalt Binder.** The grade of asphalt binder will be specified in the contract.

**402.2.2 Wet Bottom Boiler Slag.** The contractor may furnish wet bottom boiler slag of approved quality in lieu of coarse aggregate specified in Sec 402.2. If wet bottom boiler slag is used, the slag shall meet the requirements for coarse aggregate, except that the percentage of wear specified in Sec 1004.2.1 will not apply.

**402.2.3 Recycled Asphalt Pavement.** Recycled Asphalt Pavement (RAP) may be used in any mixture. A maximum of 20 percent RAP may be substituted in lieu of mineral aggregate. All RAP material, except as noted below, shall be tested in accordance with AASHTO TP 58, *Method for Resistance of Coarse Aggregate Degradation by Abrasion in the Micro-Deval Apparatus*. Aggregate shall have the asphalt coating removed by either extraction or binder ignition. The material shall be tested in the Micro-Deval apparatus at a frequency of once per 1500 tons (Mg). The percent loss shall not exceed the Micro-Deval loss of the combined virgin material by more than five percent. Micro-Deval testing will be waived for RAP material obtained from MoDOT roadways. All RAP material shall be in accordance with Sec 1002 for deleterious and other foreign material.

#### 402.3 Composition of Mixture.

**402.3.1 Gradation of Combined Aggregate.** Aggregate sources shall be from the specific ledge or combination of ledges within a quarry or processed aggregate from a particular product, as submitted in the mix design. The total aggregate for mixtures other than those containing wet bottom boiler slag in lieu of coarse aggregate, at the time of mixing with asphalt binder, shall meet the following gradation requirements:

Sieve Size	Percent Passing by Weight (Mass)
3/4 inch (19.0 mm)	100
1/2 inch (12.5 mm)	95-100
No. 4 (4.75 mm)	60-90
No. 8 (2.36 mm)	40-70
No. 30 (600 $\mu$ m)	15-35
No. 200 (75 $\mu$ m)	4-12

**402.3.2 Alternate Gradation.** The total aggregate for mixtures containing wet bottom boiler slag in lieu of coarse aggregate, at the time of mixing with asphalt binder, shall meet the following gradation requirements:

Sieve Size	Percent Passing by Weight (Mass)
1/2 inch (12.5 mm)	100
No. 4 (4.75 mm)	90-100
No. 8 (2.36 mm)	65-95
No. 30 (600 $\mu$ m)	20-40
No. 200 (75 $\mu$ m)	3-10

**402.4 Job Mix Formula.** The mixture shall be in accordance with Sec 401.4.

**402.5 Gradation and Deleterious Content Control.** In producing mixture for the project, the plant shall be operated such that no deviations from the job mix formula are made. The contractor shall determine on a daily basis, at a minimum, the gradation on the aggregate reclaimed from the RAP by either extraction or binder ignition. The gradation results shall be used to determine the daily specification compliance for the combined gradation. Mixture as produced will be subject to the following tolerances and control:

(a) The total aggregate gradations shall be within the master range specified in Sec 402.3.

(b) Material passing the No. 200 (75  $\mu$ m) sieve shall not vary from the job mix formula by more than  $\pm 2.0$  percentage points.

(c) The deleterious content of the material retained on the No. 4 (4.75 mm) sieve shall not exceed the limits specified in Sec 1004.2.

(d) If the plasticity index of any fraction exceeds that of the material approved for the mix design, additional testing may be required.

(e) The quantity of asphalt binder introduced into the mixer shall be that quantity specified in the job mix formula. No changes may be made to the quantity of asphalt binder specified in the job mix formula without written approval from the engineer. The quantity of asphalt binder determined by calculation or tests on the final mixture shall not vary more than  $\pm 0.5$  percent from the job-mix formula.

**402.6 Sample Location.** The gradations of the total aggregate will be determined from samples taken from the hot bins on the batch-type plants, or from hot bins or combined hot aggregate flow on continuous mixing plants, or from the combined cold feed on dryer-drum

plants. The deleterious content of the total aggregate will be determined from the samples taken from the combined cold feed belt. Samples for plasticity index will be taken from the stockpile. The RAP shall be sampled from the RAP feeding system on the asphalt plant.

**402.7 Moisture Content.** The bituminous mixture, when sampled and tested in accordance with MoDOT Test Method TM 53, shall contain no more than 0.5 percent moisture by weight (mass) of the mixture.

**402.8 Contamination.** The bituminous mixture shall not be contaminated with deleterious agents such as unburned fuel, objectionable fuel residue or any other material not inherent in the job mix formula.

**402.9 Field Laboratory.** The contractor shall provide a Type 3 field laboratory in accordance with Sec 601.

**402.10 Construction Requirements.**

**402.10.1 Weather Limitations.** Bituminous mixtures shall not be placed (1) when either the air temperature or the temperature of the surface on which the mixture is to be placed is below 50 F (10 C) or (2) on any wet surface or frozen pavement. Temperatures shall be obtained in accordance with MoDOT Test Method TM 20.

**402.10.2 Bituminous Mixing Plants.** Bituminous mixing plants and preparation of material and mixtures shall be in accordance with Sec 404.

**402.10.3 Subgrade Preparation.** The subgrade upon which the bituminous mixture is to be placed shall be tacked as specified in the contract, in accordance with Sec 407.

**402.10.4 Hauling Equipment.** Trucks used for hauling bituminous mixtures shall be in accordance with Sec 404.

**402.10.5 Spreading.** The existing surface shall be cleaned of all dirt, packed soil or any other foreign material prior to spreading the bituminous mixture. The mixture shall be spread in the quantity required to obtain the compacted thickness and cross section shown on the plans. The paver shall be operated at a speed that will give the best results. The rate of delivery of the mixture to the paver shall be coordinated to provide, where practical, a uniform rate of placement without intermittent operation of the paver. On small areas and on areas that are inaccessible to mechanical spreading and finishing equipment, the mixture may be spread and finished by hand methods when permitted by the engineer.

**402.10.5.1 Irregularities.** The mixture shall be spread without tearing the surface and struck off such that the surface is smooth and true to cross section, free from all irregularities and of uniform density throughout. Care shall be used in handling the mixture to avoid segregation. Areas of segregated mixture shall be removed and replaced with suitable mixture. The outside edge alignment shall be uniform and any irregularities shall be corrected by adding or removing mixture before compacting.

**402.10.5.2 Pavement Edge Differential.** No pavement edge differential shall be left in place for more than seven days, without written approval from the engineer.

**402.10.6 Joints.** Transverse joints shall be formed by cutting back on the previous run to expose the full depth of the layer. When a transverse vertical edge is to be left and opened to traffic, a temporary depth transition shall be built as approved by the engineer. The longitudinal joint shall be at the lane lines of the traveled way except that the placement width



of bituminous surface may be adjusted such that temporary raised pavement markers will not fall on a longitudinal joint. Each side of the joint shall be flush and along true lines.

**402.10.7 Compaction.** The mixture shall be thoroughly compacted by at least three complete coverages over the entire area with either a pneumatic tire roller or a tandem-type steel wheel roller each weighing (having a mass of) no less than 10 tons (9 Mg). All rollers used shall be in satisfactory condition, capable of reversing without backlash, and steel wheel rollers shall be equipped with scrapers. Rollers shall have a system for moistening each roll or wheel. Rolling shall begin as soon after spreading the mixture as the new surface will bear the weight (mass) of the roller without undue displacement. Final rolling shall be done by the steel wheel roller. Rolling shall be performed at proper time intervals and shall be continued until there is no visible evidence of further consolidation and until all roller marks are eliminated.

**402.10.8 Surface Condition.** The surface of the mixture after compaction shall be smooth and uniform. Any mixture showing an excess of asphalt binder or that becomes loose and broken, mixed with dirt or is in any way defective shall be removed and replaced at the contractor's expense with a satisfactory mixture, which shall be immediately compacted to conform with the surrounding area.

**402.10.9 Hauling Over Completed Surface.** Hauling of plant mix bituminous mixture over any completed portion of the project will not be permitted.

**402.11 Method of Measurement.** The weight (mass) of the mixture will be determined from the batch weights (masses) if a batch-type plant is used. If other types of plants are used, the weight (mass) of the mixture will be determined by weighing (determining the mass of) each truck load on scales in accordance with Sec 310. Measurement will be made to the nearest 0.1 ton (0.1 Mg) for the total tonnage (mass) of material accepted.

**402.12 Basis of Payment.** The accepted quantities of plant mix bituminous surface leveling will be paid for at the contract unit price for each of the pay items included in the contract.



## SECTION 1004

### GRADED AGGREGATE FOR BITUMINOUS SURFACES

1004.1 Scope. This specification covers aggregate to be used in bituminous surfacing.

#### 1004.2 Course Aggregate.

1004.2.1 All Coarse aggregate shall consist of sound, durable rock, free from cemented lumps or objectionable coatings. The percentage of deleterious substances shall not exceed the following values and the sum of percentages of all deleterious substances shall not exceed 8.0 percent.

Deleterious Material	Percent by Weight (Mass)
Deleterious Rock	8.0
Mud Balls and Shale Combined	2.0
Clay, uniformly dispersed	3.0
Other Foreign Material	0.5

1004.2.1.1 The total coarse aggregate for asphaltic concrete shall be in accordance with Sec 1004.2.1.

1004.2.1.2 If a density requirement is specified for asphaltic concrete, the total quantity of chert in each size or fraction of produced crushed stone aggregate, including that permitted as deleterious, shall not vary by more than 10 percentage points from the quantity present in the aggregate used in the approved laboratory job mixtures.

1004.2.1.3 Crushed stone shall be produced from rock of uniform quality. Rock tested from any combination of ledges for source approval and trial mix samples shall meet the following criteria.

Property	Value
Los Angeles Abrasion, AASHTO T 96, percent loss, max.	55
Absorption, AASHTO T 85, percent, max.	4.5

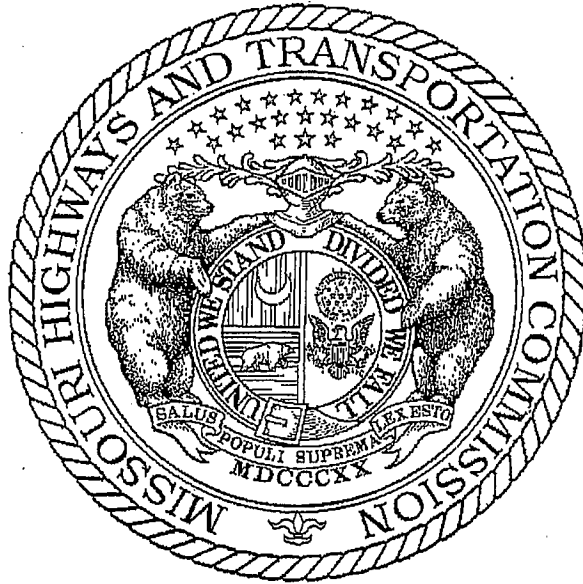
1004.2.2 Gravel aggregate shall be washed sufficiently to remove any objectionable coating and shall meet the following criteria for source approval and trial mix samples.

Property	Value
Los Angeles Abrasion, AASHTO T 96, percent loss, max.	55
Absorption, AASHTO T 85, percent, max.	5.5

1004.2.3 Steel slag consisting principally of a fused mixture of oxides and silicates shall be a synthetic aggregate produced as a by-product of basic oxygen, electric or open hearth steel making furnaces. The steel slag shall be aged at least three months after crushing and screening. Steel slag, which has been previously crushed, screened, and aged three months will not be required to receive additional aging. Steel slag from one source shall not be blended with steel slag from a different source.

1004.3 The aggregate shall be in accordance with the following requirements for the grade specified in the contract. If grade is not specified, any listed grade may be used.

Percent Passing								
Grade	Type of Material	Sieve Size						
		3/4 in.	1/2 in.	3/8 in.	#4	#8	#30	#200
		19.0 mm	12.5 mm	9.5 mm	4.75 mm	2.36 mm	600 $\mu$ m	75 $\mu$ m
1	Crushed Stone or Porphyry	100	95 - 100	65 - 95	20 - 55	2 - 20	....	0 - 5
2	Gravel	100	95 - 100	....	40 - 80	15 - 50	0 - 30	0 - 5
3	Chat	100	95 - 100	....	45 - 85	30 - 60	0 - 30	0 - 5



**MISSOURI  
HIGHWAYS and TRANSPORTATION  
COMMISSION**

**JEFFERSON CITY, MISSOURI**

**GENERAL PROVISIONS AND  
SUPPLEMENTAL SPECIFICATIONS TO 2004  
MISSOURI STANDARD SPECIFICATIONS FOR  
HIGHWAY CONSTRUCTION**

**Effective March 1, 2007**

**SECTION 303 – ROCK BASE***Delete Sec 303.2 through 303.2.2 and substitute the following:*

07/06

**303.2 Material.** The material source for rock base shall be in accordance with approval from the engineer. Geologic conditions may vary from available subsurface information. Approval from the engineer of a source for the inherent stone will not constitute approval of the final rock base product.

**303.2.1** Material for rock base shall be durable stone or broken concrete containing a combined total of no more than 10 percent, by weight, of earth, sand, shale and non-durable rock. Material from geologic-filled sink deposits or stone indicating evidence of solution activity shall not be used.

**303.2.2** The material shall be as large as can be conveniently handled within the limits of this specification. No particle dimension shall exceed approximately 12 inches (300 mm). There shall be some material with particle dimensions exceeding approximately 9 inches (225 mm).

*Delete Sec 303.3.3 and substitute the following:*

07/06

**303.3.3** Rock base shall be 18 inches (450 mm) thick and may be placed in one lift. Rock base material may be placed thicker, with approval from the engineer, in maximum 24-inch (600 mm) lifts, provided a uniform drainage plane under the rock base is provided. No particle dimension shall exceed approximately 6 inches (150 mm) less than the placed lift thickness. There shall be some material with particle dimensions exceeding approximately 50 percent of the lift thickness. No additional payment will be made for the thicker rock base material. Class C Excavation in rock cuts shall be performed to allow placement of the specified lift thickness.

**SECTION 304 – AGGREGATE BASE COURSE***Amend Sec 403.4 to include the following:*

06/06

**304.4.3 Small Quantities.** When less than 7,500 square yards (square meters) of aggregate base is specified in the contract the testing will be done by the engineer.

**SECTION 401 – PLANT MIX BITUMINOUS BASE AND PAVEMENT***Delete Sec 401.2.1 and substitute the following:*

11/05; 12/05

**401.2.1** The grade of asphalt binder will be specified in the contract. When the plasticity index on individual aggregate fractions with 10 percent or more passing the No. 30 (600 µm) sieve exceeds 3, a moisture susceptibility test shall be required in accordance with Sec 401.4.5 during the mix design process. If the plasticity index exceeds that of the material approved for the mix design, additional testing may be required. All material shall be in accordance with Division 1000, Material Details, and specifically as follows:

Item	Section
Coarse Aggregate	1004.2
Fine Aggregate	1002.3
Mineral Filler	1002.4
Hydrated Lime	1002.5
Asphalt Binder, Performance Graded (PG)	1015

*Delete Sec 401.2.2 and substitute the following:*

11/05

**401.2.2 Recycled Asphalt Pavement.** Recycled Asphalt Pavement (RAP) may be used in any mixture. A maximum of 20 percent RAP may be substituted in lieu of mineral aggregate. All RAP material, except as noted below, shall be tested in accordance with AASHTO TP 58, *Method for Resistance of Coarse Aggregate Degradation by Abrasion in the Micro-Deval Apparatus*. Aggregate shall have the asphalt coating removed by either extraction or binder ignition. The material shall be tested in the Micro-Deval apparatus at a frequency of once per 1500 tons (Mg). The percent loss shall not exceed the Micro-Deval loss of the combined virgin material by

more than five percent. Micro-Deval testing will be waived for RAP material obtained from MoDOT roadways. All RAP material shall be in accordance with Sec 1004 for deleterious and other foreign material.

*Delete Sec 401.3 – 401.3.2 and substitute the following:*

11/05

**401.3 Composition of Mixtures.** Aggregate sources shall be from the specific ledge or combination of ledges within a quarry, or processed aggregate from a particular product, as submitted in the mix design. The total aggregate prior to mixing with asphalt binder shall be in accordance with the following gradation requirements:

Sieve Size	Percent Passing by Weight (Mass)		
	Base	BP-1	BP-2
1 inch (25.0 mm)	100	100	100
3/4 inch (19.0 mm)	85-100	100	100
1/2 inch (12.5 mm)	60-90	85-100	95-100
No. 4 (4.75 mm)	35-65	50-70	60-90
No. 8 (2.36 mm)	25-50	30-55	40-70
No. 30 (600 $\mu$ m)	10-35	10-30	15-35
No. 200 (75 $\mu$ m)	5-12	4-12	4-12

*Amend Sec 401.4.2 to include the following and re-letter subsequent sections:*

04/06;05/06

(b) Source, type (formation, etc.), ledge number(s) if applicable, gradation, and deleterious content of the aggregate.

(c) Plasticity index of each aggregate fraction.

(d) Bulk and apparent specific gravities and absorption of each aggregate fraction in accordance with AASHTO T 85 for coarse aggregate and AASHTO T 84 for fine aggregate, including all raw data.

*Delete Sec 401.5 in its entirety and insert the following:*

04/06

**401.5 Gradation and Deleterious Content Control.** In producing mixtures for the project, the plant shall be operated such that no intentional deviations from the job-mix formula are made. The contractor shall determine on a daily basis at minimum, the gradation on the aggregate reclaimed from the RAP by either extraction or binder ignition. The gradation results shall be used to determine the daily specification compliance for the combined gradation. Mixtures as produced shall be subject to the following tolerances and controls:

(a) The total aggregate gradation shall be within the master range specified in Sec 401.3.

(b) The maximum variations from the approved job-mix formula shall be within the following tolerances:

Passing No. 8 (2.36 mm) sieve	$\pm 5.0$ percentage points
Passing No. 200 (75 $\mu$ m) sieve	$\pm 2.0$ percentage points

(c) The deleterious content of the material retained on the No. 4 (4.75 mm) sieve shall not exceed the limits specified in Sec 1004.2.

(d) If the plasticity index of any fraction exceeds that of the material approved for the mix design, additional testing may be required.

(e) The quantity of asphalt binder introduced into the mixer shall be the quantity specified in the job-mix formula. No changes shall be made to the quantity of asphalt binder without written approval from the engineer. The quantity of asphalt binder determined by tests on the final mixture shall not vary by more than  $\pm 0.5$  percent from the job-mix formula.

*Delete Sec 401.5.1 in its entirety and insert the following:*

04/06

**401.5.1 Sample Location.** The gradations of the total aggregate will be determined from samples taken from the hot, bins on batch-type plants or continuous mixing plants or from the composite cold feed belt on drum mix plants. The

deleterious content of the total aggregate shall be determined from samples taken from the composite cold feed belt. When required, samples for plasticity index shall be taken from the stock pile. The RAP shall be sampled from the RAP feeding system on the asphalt plant. Samples for asphalt content determination may be taken at the plant.

*Delete Sec 401.8.1 in its entirety and insert the following:*

04/06

**401.8.1 Mixture Testing.** The contractor shall test the mixture at least once every 1000 tons (1000 Mg) of production or a minimum of once per day for the gradation, deleterious content, and the asphalt content. If RAP is used and AASHTO T 308 is used to determine the asphalt content, the binder ignition oven shall be calibrated in accordance with MoDOT Test Method TM 77. At the engineer's discretion, testing may be waived when production does not exceed 200 tons (200 Mg) per day. The contractor shall certify the proper proportions of a previously proven mixture were used.

*Delete Sec 401.8.2 in its entirety and insert the following:*

04/06

**401.8.2 Failing Test.** If a gradation, deleterious content, or asphalt content test result falls outside of the specification tolerances, a review or adjustment of the plant settings and production shall be made and another sample shall be immediately taken. If the second test falls outside of the specification tolerances, production shall be immediately ceased until the mixture can be brought back into specification. Cold feed bins may be adjusted 5.0 percent. Material from different formations or ledges within the formation may be adjusted no more than 2.0 percent from the approved job mix formula. Mixtures requiring more than 5.0 percent adjustment will require a new mix design.

*Delete Sec 401.8.3 in its entirety and insert the following:*

04/06

**401.8.3 Retained Samples.** One half of the contractor's sample for gradation, deleterious content, plasticity index, and asphalt content and all cores shall be retained for the engineer. The contractor shall retain the samples for 7 days.

*Delete Sec 401.9 in its entirety and insert the following:*

04/06

**401.9 Quality Assurance.** Acceptance tests will be performed by the engineer at a rate of one independent sample per day when production exceeds 500 tons (500 Mg) per day. A favorable comparison will be considered when a QA test is within the specification tolerances. At least once for every five days of production, a split of the contractor's sample will be tested. If the results of the split sample are not within five percent on all sieves above the No. 200 (75µm), two percent on the No. 200 (75µm), within the specification ranges on the deleterious content, within two percentage points on the plasticity index, and within 0.5 percent on the asphalt content from the contractor's results, another split sample will be taken jointly with the contractor and tested. If the second test results do not compare within the specification tolerances, production shall cease until the discrepancy is resolved. If the second test results compare within the above tolerances, production may continue. Results of QA testing will be furnished to the contractor within 24 hours of obtaining the sample.

## **SECTION 402 – PLANT MIX BITUMINOUS SURFACE LEVELING**

*Delete Sec 402.2 and substitute the following:*

11/05

**402.2 Material.** All material shall be in accordance with Division 1000, Material Details, and specifically as follows:

Item	Section
Coarse Aggregate	1004.2
Fine Aggregate	1002.3
Mineral Filler	1002.4
Asphalt Binder, Performance Graded (PG)	1015.3

*Delete Sec 402.2.2 and substitute the following:*

04/06

**402.2.2 Wet Bottom Boiler Slag.** The contractor may furnish wet bottom boiler slag of approved quality in lieu of coarse aggregate specified in Sec 402.2. If wet bottom boiler slag is used, the slag shall meet the requirements for coarse aggregate, except that the percentage of wear specified in Sec 1004.2.1 will not apply.

*Delete Sec 402.2.3 and substitute the following:*

11/05

**402.2.3 Recycled Asphalt Pavement.** Recycled Asphalt Pavement (RAP) may be used in any mixture. A maximum of 20 percent RAP may be substituted in lieu of mineral aggregate. All RAP material, except as noted below, shall be tested in accordance with AASHTO TP 58, *Method for Resistance of Coarse Aggregate Degradation by Abrasion in the Micro-Deval Apparatus*. Aggregate shall have the asphalt coating removed by either extraction or binder ignition. The material shall be tested in the Micro-Deval apparatus at a frequency of once per 1500 tons (Mg). The percent loss shall not exceed the Micro-Deval loss of the combined virgin material by more than five percent. Micro-Deval testing will be waived for RAP material obtained from MoDOT roadways. All RAP material shall be in accordance with Sec 1002 for deleterious and other foreign material.

*Delete Sec 402.3.3*

11/05

*Delete Sec 402.5 and substitute the following:*

04/06

**402.5 Gradation and Deleterious Content Control.** In producing mixture for the project, the plant shall be operated such that no deviations from the job mix formula are made. The contractor shall determine on a daily basis, at a minimum, the gradation on the aggregate reclaimed from the RAP by either extraction or binder ignition. The gradation results shall be used to determine the daily specification compliance for the combined gradation. Mixture as produced will be subject to the following tolerances and control:

- (a) The total aggregate gradations shall be within the master range specified in Sec 402.3.
- (b) Material passing the No. 200 (75  $\mu$ m) sieve shall not vary from the job mix formula by more than  $\pm 2.0$  percentage points.
- (c) The deleterious content of the material retained on the No. 4 (4.75 mm) sieve shall not exceed the limits specified in Sec 1004.2.
- (d) If the plasticity index of any fraction exceeds that of the material approved for the mix design, additional testing may be required.
- (e) The quantity of asphalt binder introduced into the mixer shall be that quantity specified in the job mix formula. No changes may be made to the quantity of asphalt binder specified in the job mix formula without written approval from the engineer. The quantity of asphalt binder determined by calculation or tests on the final mixture shall not vary more than  $\pm 0.5$  percent from the job-mix formula.

*Delete Sec 402.6 and substitute the following:*

04/06

**402.6 Sample Location.** The gradations of the total aggregate will be determined from samples taken from the hot bins on the batch-type plants, or from hot bins or combined hot aggregate flow on continuous mixing plants, or from the combined cold feed on dryer-drum plants. The deleterious content of the total aggregate will be determined from the samples taken from the combined cold feed belt. Samples for plasticity index will be taken from the stockpile. The RAP shall be sampled from the RAP feeding system on the asphalt plant.

#### SECTION 403 – ASPHALTIC CONCRETE PAVEMENT

*Delete Sec 403.1.1 and substitute the following:*

12/05

**403.1.1 Naming Convention.** The nomenclature of Superpave bituminous mixture names, such as SP125CLP, will be as follows. When only the aggregate size is shown, such as SP125, the specifications shall apply to all variations of that size, such as SP125B, SP125C, SP125CLP, etc. When "x" is indicated, such as SP125xLP, specifications shall apply to all variations of mixture designs. Stone Matrix Asphalt will be generally referred to as SMA.



approval of the mineral filler, the manufacturer and product will be placed on a list of qualified SMA mineral fillers.

## **SECTION 1004 – GRADED AGGREGATE FOR BITUMINOUS SURFACES**

*Delete Sec 1004.2 – 1004.2.2 and substitute the following:*

11/05, 04/06

### **1004.2 Course Aggregate.**

1004.2.1 All Coarse aggregate shall consist of sound, durable rock, free from cemented lumps or objectionable coatings. The percentage of deleterious substances shall not exceed the following values and the sum of percentages of all deleterious substances shall not exceed 8.0 percent.

Deleterious Material	Percent by Weight (Mass)
Deleterious Rock	8.0
Mud Balls and Shale Combined	2.0
Clay, uniformly dispersed	3.0
Other Foreign Material	0.5

1004.2.1.1 The total coarse aggregate for asphaltic concrete shall be in accordance with Sec 1004.2.1.

1004.2.1.2 If a density requirement is specified for asphaltic concrete, the total quantity of chert in each size or fraction of produced crushed stone aggregate, including that permitted as deleterious, shall not vary by more than 10 percentage points from the quantity present in the aggregate used in the approved laboratory job mixtures.

1004.2.1.3 Crushed stone shall be produced from rock of uniform quality. Rock tested from any combination of ledges for source approval and trial mix samples shall meet the following criteria.

Property	Value
Los Angeles Abrasion, AASHTO T 96, percent loss, max.	55
Absorption, AASHTO T 85, percent, max.	4.5

1004.2.2 Gravel aggregate shall be washed sufficiently to remove any objectionable coating and shall meet the following criteria for source approval and trial mix samples.

Property	Value
Los Angeles Abrasion, AASHTO T 96, percent loss, max.	55
Absorption, AASHTO T 85, percent, max.	5.5

1004.2.3 Steel slag consisting principally of a fused mixture of oxides and silicates shall be a synthetic aggregate produced as a by-product of basic oxygen, electric or open hearth steel making furnaces. The steel slag shall be aged at least three months after crushing and screening. Steel slag, which has been previously crushed, screened, and aged three months will not be required to receive additional aging. Steel slag from one source shall not be blended with steel slag from a different source.

## **SECTION 1005 – AGGREGATE FOR CONCRETE**

*Delete Sec 1005.2.1 and substitute the following:*

04/06

1005.2.1 All coarse aggregate for concrete shall consist of sound, durable rock, free from objectionable coatings and frozen and cemented lumps. The percentage of deleterious substances shall not exceed the following values, and the sum of percentages of all deleterious substances, exclusive of Items 5 and 6, shall not exceed 6.0 percent. For crushed stone, the percentage of wear shall not exceed 50 when tested in accordance with AASHTO T 96.

Deleterious Material	Percent by Weight (Mass)
Deleterious Rock	6.0
Shale	1.0
Chert in Limestone	4.0
Other Foreign Material	0.5

**Missouri Highways and Transportation Commission**  
**Standard Bid/Proposal Provisions, General Terms and Conditions and Special Terms and Conditions**

**STANDARD SOLICITATION PROVISIONS**

- a. The Missouri Department of Transportation (MoDOT) reserves the right to reject any or all bids/quotes/proposals, and to accept or reject any items thereon, and to waive technicalities. In case of error in the extension of prices in the bid/quote/proposal, unit prices will govern.
- b. All bids/quotes/proposals must be signed with the firm name and by a responsible officer or employee. Obligations assumed by such signature must be fulfilled.
- c. By virtue of statutory authority, a preference will be given to materials, products, supplies, provisions and all other articles produced, manufactured, made or grown, within the State of Missouri.
- d. Time of delivery is a part of the consideration and, if not otherwise stated in the solicitation documents, must be stated in definite terms by the Bidder/Officer and must be adhered to. If time varies on different items, the Bidder/Officer shall so state.
- e. If providing bids/quotes/proposals for commodities, the Bidder/Officer will state brand or make on each item. If bidding or proposing other than the make, model or brand specified, the manufacturer's name, model number or catalog number must be given.
- f. **For bids/proposals of \$25,000 or more**, no bids/proposals by telephone, telegram or telefax will be accepted. If provided, these bids/proposals should be returned in the MoDOT solicitation return envelope.
- g. If a solicitation return envelope is provided by MoDOT, the bid/quote/proposal should be returned in the envelope provided with the Bid/RFQ/RFP Request Number plainly indicated thereon.
- h. The date specified for the returning of bids/quotes/proposals is a firm deadline and all bids/quotes/proposals must be received at the designated office by that time. The Department does not recognize the U.S. Mail, Railway Express Agency, Air Express, or any other organization, as its agent for purposes of accepting proposals. All proposals arriving at the designated office after the deadline specified will be rejected.

**GENERAL TERMS AND CONDITIONS**

**General Performance**

- a. This work is to be performed under the general supervision and direction of the Missouri Department of Transportation (MoDOT) and, if awarded any portion of the work, the Contractor agrees to furnish at his own expense all labor and equipment required to complete the work, it being expressly understood that this solicitation is for completed work based upon the price(s) specified and is not a solicitation for rental of equipment or employment of labor by MoDOT, and MoDOT is to have no direction or control over the employees used by the Contractor in performance of the work.

**Deliveries**

- a. Unless otherwise specified on the solicitation documents or purchase order, suppliers shall give at least 24 hours advance notice of each delivery. Delivery will only be received between the hours of 8:00 a.m. to 3:00 p.m., Monday through Friday. Material arriving after 3:00 p.m. will not be unloaded until the following workday. No material will be received on Saturday, Sunday or state holidays.
- b. If the prices bid herein include the delivery cost of the material, the Contractor agrees to pay all transportation charges on the material as FOB - Destination. Freight costs must be included in the unit price bid and not listed as a separate line item.
- c. Any demurrage is to be paid by the Contractor direct to the railroad or carrier.

**Nondiscrimination**

- a. The Contractor shall comply with the Regulations relative to nondiscrimination in federally-assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- b. All solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of the Contractor's obligations under this contract and the Regulations, will be relative to nondiscrimination on the grounds of race, color, or national origin.
  - 1) **Sanctions for Noncompliance:** In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, MoDOT shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
    - i. withholding of payments to the Contractor under the contract until the Contractor complies, and/or,
    - ii. cancellation, termination or suspension of the contract, in whole or in part.

**Contract/Purchase Order**

- a. By submitting a bid/quote/proposal, the Bidder/Officer agrees to furnish any and all equipment, supplies and/or services specified in the solicitation documents, at the prices quoted, pursuant to all requirements and specifications contained therein.
- b. A binding contract shall consist of: (1) the solicitation documents, amendments thereto, and/or Best and Final Offer (BAFO) request(s) with any changes/additions, (2) the Contractor's proposal and/or submitted pricing, and (3) the MHTC's acceptance of the proposal and/or bid by purchase order or post-award contract.
- c. A notice of award does not constitute an authorization for shipment of equipment or supplies or a directive to proceed with services. Before providing equipment, supplies and/or services, the Contractor must receive a properly authorized purchase order and/or notice to proceed.
- d. The contract expresses the complete agreement of the parties and performance shall be governed solely by the specifications and requirements contained therein. Any change, whether by modification and/or supplementation, must be accomplished by a formal contract amendment signed and approved by and between the duly authorized representative of the Contractor and the duly authorized representative of the MHTC, by a modified purchase order prior to the effective date of such modification. The Contractor expressly and explicitly understands and agrees that no other method and/or no other document, including correspondence, acts, and oral communications by or from any person, shall be used or construed as an amendment or modification.

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**Subcontracting**

- a. It is specifically understood that no portion of the material or any interest in the contract, shall be subcontracted, transferred, assigned or otherwise disposed of, except with the written consent of MoDOT. Request for permission to subcontract or otherwise dispose of any part of the work shall be in writing to MoDOT and accompanied by documentation showing that the organization which will perform the work is particularly experienced and equipped for such work.
- b. Consent to subcontract or otherwise dispose of any portion of the work shall not be construed to relieve the Contractor of any responsibility for the production and delivery of the contracted work and the completion of the work within the specified time.
- c. All payments for work performed by a subcontractor shall be made to the Contractor to whom the contract was awarded and the purchase order issued.

**Invoicing and Payment**

- a. MoDOT is exempt from paying Missouri Sales Tax, Missouri Use Tax and Federal Excise Tax. However, the Contractor may themselves be responsible for the payment of taxes on materials they purchase to fulfill the contract. A Federal Excise Tax Exemption Certificate will be furnished to the successful Bidder/Officer upon request.
- b. Each invoice should be itemized in accordance with items listed on the purchase order and/or contract. The statewide financial management system has been designed to capture certain receipt and payment information. Therefore, each invoice submitted must reference the purchase order number and must be itemized in accordance with items listed on the purchase order. Failure to comply with this requirement may delay processing of invoices for payment.
- c. Unless otherwise provided for in the solicitation documents, payment for all equipment, supplies, and/or services required herein shall be made in arrears. The Missouri Highways and Transportation Commission (MHTC) shall not make any advance deposits.
- d. The MHTC assumes no obligation for equipment, supplies, and/or services shipped or provided in excess of the quantity ordered. Any authorized quantity is subject to the MHTC's rejection and shall be returned at the Contractor's expense.
- e. The MHTC reserves the right to purchase goods and services using the state-purchasing card.

**Applicable Laws and Regulations**

- a. The contract shall be construed according to the laws of the State of Missouri. The Contractor shall comply with all local, state, and federal laws and regulations related to the performance of the contract.
- b. The Contractor must be registered and maintain good standing with the Secretary of State of the State of Missouri and other regulatory agencies, as may be required by law or regulations. Prior to the issuance of a purchase order and/or notice to proceed, the Contractor may be required to submit to MoDOT a copy of their current Authority Certificate from the Secretary of State of the State of Missouri.
  - 1) Prior to the issuance of a purchase order and/or notice to proceed, all **out-of-state** Contractors **providing services** within the state of Missouri must submit to MoDOT a copy of their current Transient Employer Certificate from the Department of Revenue, in addition to a copy of their current Authority Certificate from the Secretary of State of the State of Missouri.
- c. The contractor shall only utilize personnel authorized to work in the United States in accordance with applicable federal and state laws and Executive Order 07-13 for work performed in the United States.
- d. The exclusive venue for any legal proceeding relating to or arising, out of the contract shall be in the Circuit Court of Cole County, Missouri.

**Preferences**

- a. In the evaluation of bids/quotes/proposals, preferences shall be applied in accordance with Chapter 34 RSMo. Contractors should apply the same preferences in selecting subcontractors.
- b. By virtue of statutory authority, RSMo. 34.076 and 34.350 to 34.359, a preference will be given to materials, products, supplies, provisions and all other articles produced, manufactured, made or grown within the State of Missouri. Such preference shall be given when quality is equal or better and delivered price is the same or less.
  - 1) If attached, the document entitled **"PREFERENCE IN PURCHASING PRODUCTS"** should be completed and returned with the solicitation documents.
  - 2) If attached, the document entitled **"MISSOURI DOMESTIC PRODUCTS PROCUREMENT ACT"** should be completed and returned with the solicitation documents. **Applies if bid is Twenty-Five Thousand Dollars (\$25,000.00) or more.**
- c. In the event of a tie of low bids, the MHTC reserves the right to establish the method to be used in determining the award

**Remedies and Rights**

- a. No provision in the contract shall be construed, expressly or implied, as a waiver by the MHTC of any existing or future right and/or remedy available by law in the event of any claim by the MHTC of the Contractor's default or breach of contract.
- b. The Contractor agrees and understands that the contract shall constitute an assignment by the Contractor to the MHTC of all rights, title and interest in and to all causes of action that the Contractor may have under the antitrust laws of the United States or State of Missouri for which causes of action have accrued or will accrue as the result of or in relation to the particular equipment, supplies, and/or services purchased or produced by the Contractor in the fulfillment of the contract with the MHTC.
- c. In the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may request MoDOT to enter into such litigation to protect the interests of the MHTC, and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

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**Cancellation of Contract**

- a. The MHTC may cancel the contract at any time for a material breach of contractual obligations or for convenience by providing the Contractor with written notice of cancellation. Should the MHTC exercise its right to cancel the contract for such reasons, cancellation will become effective upon the date specified in the notice of cancellation sent to the Contractor.
- b. If the MHTC cancels the contract for breach, the MHTC reserves the right to obtain the equipment, supplies, and/or services to be provided pursuant to the contract from other sources and upon such terms and in such manner as the MHTC deems appropriate and charge the Contractor for any additional costs incurred thereby.

**Bankruptcy or Insolvency**

- a. Upon filing for any bankruptcy or insolvency proceeding by or against the Contractor, whether voluntary or involuntary, or upon the appointment of a receiver, trustee, or assigned the benefit or creditors, the Contractor must notify MoDOT immediately. Upon learning of any such actions, the MHTC reserves the right, at its sole discretion, to either cancel the contract or affirm the contract and hold the Contractor responsible for damages.

**Inventions, Patents, and Copyrights**

- a. The Contractor shall defend, protect, and hold harmless the MHTC, its officers, agents, and employees against all suits of law or in equity resulting from patent and copyright infringement concerning the Contractor's performance or products produced under the terms of the contract.

**Inspection and Acceptance**

- a. No equipment, supplies, and/or services received by MoDOT pursuant to a contract shall be deemed accepted until MoDOT has had reasonable opportunity to inspect said equipment, supplies, and/or services.
- b. All equipment, supplies, and/or services which do not comply with the specifications and/or requirements or which are otherwise unacceptable or defective may be rejected. In addition, all equipment, supplies, and/or services which are discovered to be defective or which do not conform to any warranty of the Contractor upon inspection (or at any later time if the defects contained were not reasonably ascertainable upon the initial inspection) may be rejected.
- c. The MHTC reserves the right to return any such rejected shipment at the Contractor's expense for full credit or replacement and to specify a reasonable date by which replacements must be received.
- d. The MHTC's right to reject any unacceptable equipment, supplies, and/or services shall not exclude any other legal, equitable or contractual remedies the MHTC may have.

**Warranty**

- a. The Contractor expressly warrants that all equipment, supplies, and/or services provided shall: (1) conform to each and every specification, drawing, sample or other description which was furnished to or adopted by MoDOT, (2) be fit and sufficient for the purpose expressed in the solicitation documents, (3) be merchantable, (4) be of good materials and workmanship, and (5) be free from defect.
- b. Such warranty shall survive delivery and shall not be deemed waived either by reason of the MHTC's acceptance of or payment for said equipment, supplies, and/or services.

**Status of Independent Contractor**

- a. The Contractor represents itself to be an independent Contractor offering such services to the general public and shall not represent itself or its employees to be an employee of the MHTC. Therefore, the Contractor shall assume all legal and financial responsibility for taxes, FICA, employee fringe benefits, workers' compensation, employee insurance, minimum wage requirements, overtime, etc., and agrees to indemnify, save and hold the MHTC, its officers, agents and employees harmless from and against any and all losses (including attorney fees) and damage of any kind related to such matters.

**Indemnification**

- a. The Offeror shall defend, indemnify and hold harmless the Commission, including its members and department employees, from any claim or liability whether based on a claim for damages to real or personal property or to a person for any matter relating to or arising out of the Offeror's performance of its obligations under this Agreement.

**SPECIAL TERMS AND CONDITIONS**

**Required Specifications**

- a. All materials, equipment, and/or services bid upon must comply with the attached MoDOT Specification and any other provisions outlined in the solicitation documents.

**Information and Reports**

- a. The Contractor shall provide all information and reports required by the Regulations, or Directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Missouri Department of Transportation or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations or Directives. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information the Contractor shall so certify to the Missouri Department of Transportation, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain the information.

**Award**

- a. Award of this bid will be an Open Price Agreement based on price, availability and job location.

# PREFERENCE IN PURCHASING PRODUCTS

DATE: \_\_\_\_\_

The bidders attention is directed to Section 34.076 RsMO 1986 which gives preference to Missouri corporations, firms, and individuals when letting contracts or purchasing products.

Bids/Quotations received will be evaluated on the basis of this legislation.

All vendors submitting a bid/quotation must furnish ALL information requested below.

## FOR CORPORATIONS:

State in which incorporated: \_\_\_\_\_

## FOR OTHERS:

State of domicile: \_\_\_\_\_

## FOR ALL VENDORS:

List address of Missouri offices or places of business:

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THIS SECTION MUST BE COMPLETED AND SIGNED:

FIRM NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

BY (signature required): \_\_\_\_\_

Federal Tax I.D. #: \_\_\_\_\_ if no Federal Tax I.D. # - list Social Security #: \_\_\_\_\_

NOTE: For bid/quotation to be considered, the "Preference in Purchasing Products" form must be on file in the General Services (Procurement) Division and must be dated in the current calendar year.

# District Outline Map



COUNTY	DIST.	COUNTY	DIST.	COUNTY	DIST.	COUNTY	DIST.	COUNTY	DIST.	COUNTY	DIST.
Adair .....	2	Cedar .....	7	Greene .....	8	Linn .....	2	Ozark .....	8	St. Louis .....	6
Andrew .....	1	Chariton .....	2	Grundy .....	2	Livingston .....	2	Pemiscot .....	10	Saline .....	2
Atchison .....	1	Christian .....	8	Harrison .....	1	McDonald .....	7	Perry .....	10	Schuyler .....	2
Audrain .....	3	Clark .....	3	Henry .....	4	Macon .....	2	Pettis .....	5	Scotland .....	3
Barry .....	7	Clay .....	4	Hickory .....	8	Madison .....	10	Phelps .....	9	Scott .....	10
Barton .....	7	Clinton .....	1	Holt .....	1	Maries .....	5	Pike .....	3	Shannon .....	9
Bates .....	7	Cole .....	5	Howard .....	2	Marion .....	3	Platte .....	4	Shelby .....	3
Benton .....	5	Cooper .....	5	Howell .....	9	Mercer .....	2	Polk .....	8	Stoddard .....	10
Bollinger .....	10	Crawford .....	9	Iron .....	9	Miller .....	5	Pulaski .....	9	Stone .....	8
Boone .....	5	Dade .....	7	Jackson .....	4	Mississippi .....	10	Putnam .....	2	Sullivan .....	2
Buchanan .....	1	Dallas .....	8	Jasper .....	7	Moniteau .....	5	Ralls .....	3	Taney .....	8
Butler .....	10	Daviess .....	1	Jefferson .....	6	Monroe .....	3	Randolph .....	2	Texas .....	9
Caldwell .....	1	Dekalb .....	1	Johnson .....	4	Montgomery .....	3	Ray .....	4	Vernon .....	7
Callaway .....	5	Dent .....	9	Knox .....	3	Morgan .....	5	Reynolds .....	9	Warren .....	3
Camden .....	5	Douglas .....	8	Laclede .....	8	New Madrid .....	10	Ripley .....	9	Washington .....	9
Cape Girardeau .....	10	Dunklin .....	10	Lafayette .....	4	Newton .....	7	St. Charles .....	6	Wayne .....	10
Carroll .....	2	Franklin .....	6	Lawrence .....	7	Nodaway .....	1	St. Clair .....	7	Webster .....	8
Carter .....	9	Gasconade .....	5	Lewis .....	3	Oregon .....	9	St. Francois .....	10	Worth .....	1
Cass .....	4	Gentry .....	1	Lincoln .....	3	Osage .....	5	Ste. Genevieve .....	10	Wright .....	8